

NOVEMBER/DECEMBER 2023

**23UMB11 — FUNDAMENTALS OF
MICROBIOLOGY AND MICROBIAL
DIVERSITY**

Time : Three hours

Maximum : 75 marks



SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define Prokaryote.
2. Define Classification.
3. Define Autotrophs.
4. Define Virion.
5. What is Axenic culture?
6. What is Meiosis?
7. Who discovered Microscope?
8. What is Mordant?
9. Define Antibiotics.
10. Define Disinfectant.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss briefly about Woese three domain system of classification.

Or

- (b) Write the Contributions of Louis Pasteur to Microbiology.

12. (a) Describe the salient features of Bacteria.

Or

- (b) Differentiate between Prokaryote and Eukaryote.

13. (a) Comment on Roll tube method of Anaerobic Culture.

Or

- (b) Explain the phases of Cell Cycle.

14. (a) Describe the principle and applications of Dark field Microscope.

Or

- (b) Give an account of Simple Staining.

15. (a) Define Sterilization. Explain the Sterilization by Dry Heat method.

Or

- (b) Give an account on Raditions used in Sterilization.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write in detail about Five kingdom system of Classifications.

17. Draw and explain the Gram Positive and Gram Negative Cell wall of Bacteria.

18. Discuss in detail the methodology of isolation of Pure culture of Bacteria.

19. Give an account of the Principle and Instrumentation of Electron Microscope.

20. Describe elaborately Chemical Control of Microbial growth.